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Calibration pattern store 37 stores each pattern of

features together with a coordinate system relative to

the pattern of features.  The coordinate system, in

effect, defines a reference position and orientation of

10    the photographic mat and, as will be explained in more

detail below, processing apparatus 6 calculates the

positions and orientations at which each input image was

recorded in the defined coordinate system (and thus

relative to the reference position and orientation).  In

15    addition, however, in this embodiment, the coordinate

system for each pattern is also used to define a viewing

position and viewing direction from which the first image

to be displayed each time the resulting three-dimensional

computer model is accessed for viewing will be rendered.

20    Consequently, therefore, because the viewing position and

viewing direction of the first image is defined in this

embodiment relative to the pattern of features on the

photographic mat, the user at computer processing

apparatus 2,4 can be informed of a position on the

25    photographic mat which the part of the subject object

which is to appear in the first image should face.

Thus, referring again to Figure 2, in this embodiment, each pattern of features includes a marker 170 to

5      indicate to the user the position on the photographic mat 24 that the part of the subject object which the user wishes to appear in the first image of the subsequently generated 3D computer model should face.  In addition, in this embodiment, the word "FRONT" is also stored as

10     part of the pattern alongside the marker 170 to indicate the purpose of the  marker 170.

Figure 3 illustrates how the features making up the pattern in Figure 2 are defined in a coordinate system

15     in this embodiment.

Referring to Figure 3, the coordinate system in this embodiment is a cartesian coordinate system defined by orthogonal x, y and z axes.  The origin of the coordinate

20     system is at the centre 150 of the pattern of features on the photographic mat 24, and the x and y axes lie in the plane of the features making up the pattern.  Thus, the z coordinate of each feature is 0.  The y axis passes through the front marker 170.  The radius of the circle

25     160 defining the boundary of the pattern of features is

defined to be one unit in the coordinate system.

Referring again to Figure 1, mat data generator 38
generates control signals which are sent as signals 7 to
5      customer processing apparatus 2 to enable customer
apparatus 2 to control printer 18 to print a photographic
mat 24 on a recording medium such as a piece of paper,
or to customer processing apparatus 4 to enable customer
apparatus 4 to control display panel 19 to display the
10     photographic mat. More particularly, mat data generator
38 generates the control signals using data stored in
calibration pattern store 37 defining a calibration
pattern and signals received from the customer computer
processing apparatus 2,4 providing details of the size
15     of subject object and the type of printer 18 or display
panel 19 (as will be described below). Mat data
generator 38 also generates instructions which are sent
as signal 7 to customer processing apparatus 2,4 defining
the position on the photographic mat which the part of
20     the subject object which is to appear in the first image
of the resulting three-dimensional computer model should
face. Images of the subject object on the photographic
mat are then recorded by a camera 16 and returned to the
processing apparatus 6 as signals 7 for processing. Mat
25     data generator 38 stores in memory 32 data defining the